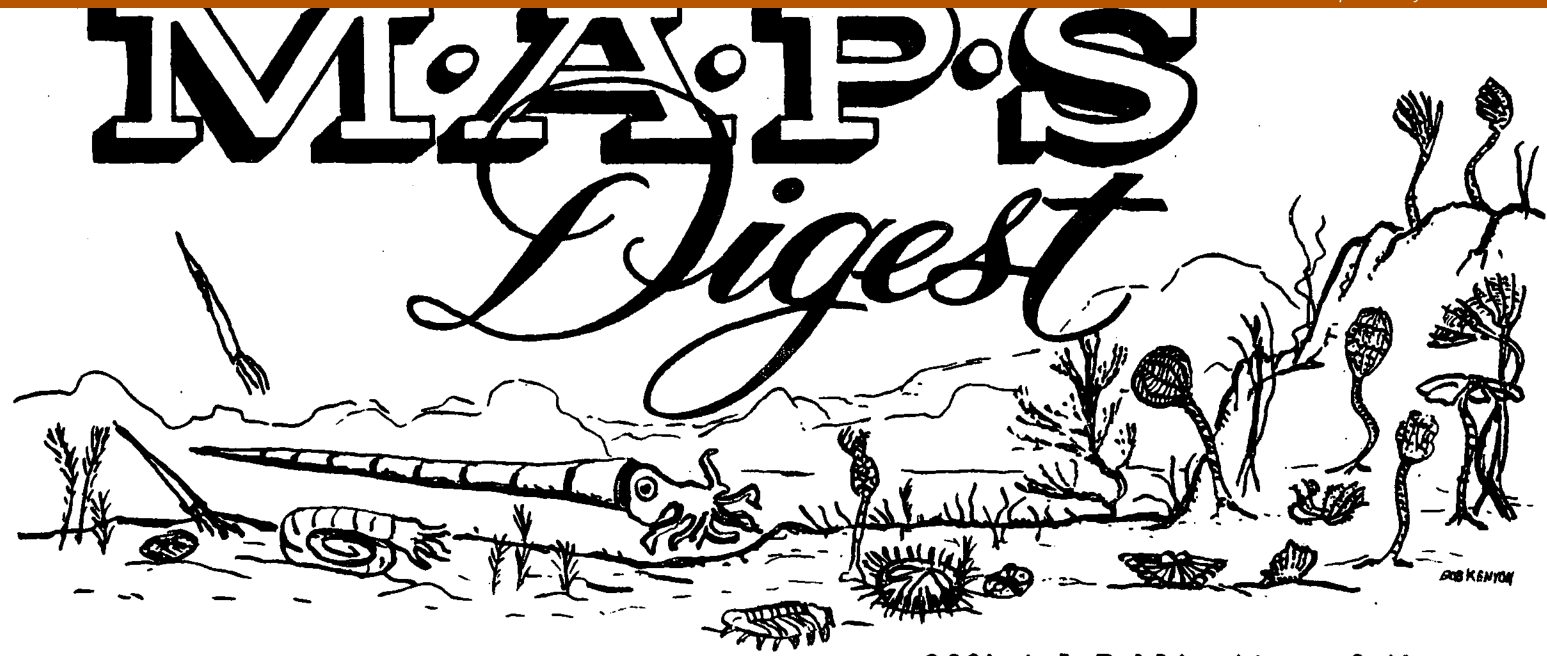

Volume 3 Number 7 March, 1980 Official Publication of the Mid-America Paleontology Society

N A T I O N A L F O S S I L E X P O I I

Many of you will be receiving your Digest and reading it as other MAPS members participate in a fossil-lover's happening. Whether in body or spirit, the place we will all be March 22 and 23 is Tanner Hall, Western Illinois University, Macomb, Illinois. There's a holiday spirit in the air!!

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FROM OUR PRESIDENT

As I write this article it is less than 2 weeks from the time of the Expo. Already we know that it will be a sell out, there being only 14 of the 125 tables not yet reserved. Collectors from at least 15 states will be involved in this, the largest assemblage of privately owned fossils any where at any time.

Expo III will again be held at Macomb in 1981, the facilities at Indiana State are not available. It has not been decided whether to continue the March-April time or to move it into June. If you have a preference between these 2 different times, let me know soon. Two arguments we've heard favoring June are: 1) Families with school age children could get away easier and 2) It would not be too cold to collect in the area if we'd move into June.

MAPS has grown at a phenominal rate, boasting a membership of approximately (continued page 2)

MARK YOUR CALENDARS

5 Apr	MAPS Meeting -- Augustana College 2 p.m.
12 - 13 Apr	Cedar Rapids Show/Swap Cedar Rapids, IA
6 - 8 June	Rocky Mountain Show Topeka, KS
7 - 8 June	Old Capitol Show/Swap Iowa City, IA
12 - 15 June	National Midwest Show Lincoln, NE
4-5-6 July	MAPS July Meeting -- Field Trip Carthage, IL
26 - 27 July	Joliet Gem Club Show/Swap Joliet, IL
2 - 3 Aug	Bedford Swap Bedford, IN
2 Aug	MAPS Meeting -- 11 a.m. Bedford

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MAPS MINUTES -- MARCH

The regular meeting of MAPS was called to order Saturday, March 1, 1980, by President Don Good.

Members and guests attending numbered about 21. The Treasurers report was read and approved. The Secretary's report was approved as printed in February MAPS Digest.

Announcements were given in regard to EXPO III (1981). It was reported that we would not be able to hold the show in Terre Haute, Indiana. The hall where it could be held has already been reserved for the date in question. It was discussed that we hold EXPO III later than the past two shows in the hope that we would be able to get some of the summer vacation, college traffic, and more members from farther away since weather would permit collecting in the Midwest.

It was moved and accepted that the Chairman of Expo contact Western Illinois University for two possible show dates, one in mid April, the other in June. Moved by Gil Norris, seconded by Allyn Adams. Gil Norris accepted the post of Chairman of Expo III.

The possible addition of a 2nd Vice-president was discussed. The job would be to help pick up some work load that the current vice-president is doing. It would take an amendment of the club's constitution to do this.

It was moved by Ray Fairbank and seconded by Madelynne Lillybeck that the Constitution be so updated.

A committee of JoAnn Good and Alberta Cray was appointed to look at the dues payment schedule. A smoother payment scheduling is in order.

It was moved by Gil Norris and seconded by Ray Fairbank that Don Good appoint a committee to look into the possibility of having a large multi-club show in 1984. Ray Fairbank and John Boland were appointed.

Some discussion followed about what to do with 2 cases donated to the club by Dennis Kingery. There is a storage problem, or the lack of it. Consideration was given to including the cases in auction at Expo II.

Meeting adjourned.

The program followed with a slide presentation and narration on LaBrea Tar Pits of California

Respectfully submitted
Thomas A. Miller, Secretary

*****

FROM OUR PRESIDENT, continued

250 at the present time. The article appearing in the March Issue of Lapidary Journal has produced a new surge in member solicitation. Present members have done a great job of making others aware of our existence. If you'll send me names and addresses of potential members we'll see that they receive the literature and membership application. Sections of the U. S. where membership is still light include the South, far East, and extreme Northwest.

I propose we have an annual award to present to the MAPS members who are responsible for obtaining the greatest number of new members. If we now had such an award, Lee and LaVeta Hodges of Mission, Kansas and Dennis Kingery of Rock Spring Wyoming would be in the running.

*****

MARCH MEETING -- LABREA TAR PITS

Rancho LaBrea--a record of Pleistocene life in California. This is one of the world's most outstanding and best known fossil areas. It opens a page for us in the record of life as it used to be, a record that takes us as far back in time as perhaps 700,000 to 800,000 years ago. The first written record of these tar seeps was by the explorer Gasper Portola in 1769; the first report of fossils in the tar was made by William Denton in 1875, the first serious collecting was done here in the period from 1906 to 1913. The land containing the present Hancock Park was given to Los Angeles County in 1915. The name "Rancho LaBrea" referred originally to

(continued page 9)

THERE'S A GLOW

What's going on around the Quad Cities? Well, that rosy glow in the sky to the south and west of us is not the Aurora Borealis--it's fossil readiness. Allyn Adams, he's in charge of security and other things, he's also kind of quiet, but you know about those people. He picked up the signs which will be arranged strategically around Tanner Hall and has assignments ready to effectively run a smooth 2 nights and days of fossil fever.

Artist Bob Kenyan made the signs. I haven't seen them, mind, in fact I get most of this in snitches from here and there. Last year I did not know many people too well, but this year is different. Bob is the one who drew the MAPS Digest head. One simply sits down with Bob and tells him what's needed and 2 days later Bob calls. His work is extraordinary. (See Lapidary Journal March). We'll use his work at the National in Lincoln, too. He drew something for the membership list--it's so beautiful people may forget to pick up the list because they are looking at the art work in the sign.

Don has been talking about Cheryl DeRosear and her organizational abilities since last year. She and Doug are in charge of all the displays and the sell/swap tables. Last year I think there were about 42 tables, this year at least 120. I guess Cheryl is having trouble sleeping she's so excited. It's even more exciting when you know her, because she is a tiny, petite little gal who has sparkling eyes and a beautiful smile, but she doesn't say too much, either. Actually, that glow is no doubt coming up from around Donnellson.

And then there's Don Good--his mind works like pop corn. I had 3 letters from him this week alone. (I think he must send at least as many to Bob Kenyon.) It began to look as though I'd better quit my job and hire a secretary, but then I got to thinking, how am I going to pay the secretary, so I just went on to work. He writes about all his ideas. He got his little town of Aledo into the international banking scene this week with a 5,000 yen bill from a member in Japan. I suppose Chase Manhattan may have been a might bored, but I bet all of Aledo knows about MAPS today.

Then, there's Gil and Gerry. They are two of the most accommodating people in the world. I know they have to be using their van. (Gil puts it up on blocks to cool down in the winter, it runs so much fossilling in the summer.) They say--"they say"--this is his second van. He wore the first one out on field trips. If you've seen his collection, it's not hard to understand. He and Gerry are synchronizing schedules at the airport. Someone got so concerned because we all made reservations in January and who knows when we will all be getting in, they called up to make certain those reservations stayed firm.

Alberta Cray, way out there in Cedar Rapids, patiently waits for the membership list. That took a couple hours this year because we are getting larger. She'll have it all put together by the time she gets to Macomb.

John Fagan wrote he was going to hunt fossils coming in to Macomb and going back to Chicago. He's a Brother, you know. I got up and looked out at the snow on the ground and the fluvial precipation still coming down and thought, wow, John! But, he must have connections I don't. Yesterday it got into the high 50's and a large thunder storm today polished off the rest of the snow. It's March, you know, so no doubt the winds will blow next week and John'll be out there cracking rock sure enough.

BC says he's coming. I'm putting in for 30 minutes right now. The fruits of that little conversation will appear in next month's Digest. You may have guessed, I'm NOT a scientist. BC's my mentor.

In other words, it's All Systems GO!! See you in Macomb.

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Hills west of Rockford, IA are young. Barely 12,000 years have passed since the prairie of which they are part was laid bare by the melting of glacial ice.

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MINING SAFETY ADMINISTRATION AMENDMENT
issued December

Submitted by: Philip Marcus, 2020 Henderson Avenue, Wheaton, MD 20902

Over the past several weeks, MSHA has received several requests for additional clarification of the application of the training regulations to rock collectors. As was stated in the MSHA bulletin of May 22, 1979, rock collectors are considered visitors to the mine, and as such, are not covered by the training regulations. However, the mine operator has the ultimate responsibility for the safety of all visitors who enter his mine, including rock collectors. Thus, the operator must make an assessment of the nature of the visitors' activities at the mine to determine if any action is necessary on his part. With respect to rock collectors, the following requirements should be met:

1. All rock collectors, whether at surface mines or quarries or underground mines, should wear appropriate safety equipment.

2. Rock collectors at surface mines and quarries whose activities require that they enter the active working areas of the mines should receive hazard training. The purpose of this training is to familiarize the rock collectors with the hazards they may encounter at the mine concerning mobile equipment, blasting, highwalls, etc.

3. Rock collectors at surface mines and quarries whose activities are away from the active working area or which occur while the operation is inactive, such as weekends, need receive no training at all.

4. Rock collectors at underground mines should be accompanied by experienced miners.

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FOSSIL TEETH POINT TO EARLIEST PREDATOR

Science News December 14, 1974

Most of the land in Nevada and California may be high and dry now, but at one time it formed the bottom of an ocean. A new paleontological find indicates that the temperate seas that existed there 600 million years ago spawned the oldest predator yet found--a large, squid-like mollusc.

Paleontologists J. Wyatt Durham of the University of California at Berkely and Jean B. Firby of the California Acadamy of Sciences in San Francisco found tiny cone shaped teeth embedded in fossils from the White Mountains near Bishop, California. Their report is in the November Journal of Paleontology.

The fossils were dated at about 600 million years by comparison with other rocks from the Lower Cambrian of California (about 550 to 600 million years ago). The teeth--or more properly "denticles" (teeth are continually repaired, denticles wear away with time)--were found in long bands similar to the rasping tongues or "radulas" of other molluscs. The denticles appear most like those of living members of the predatory molluscan class Cephalopoda, the team reports. The assignment to geologic period, phylum and class lead them to conclude that they have discovered invertebrate predators 100 million years older than any yet found.

Evidence of arthropods called trilobites, one of the most abundant sea creatures at that time and place, was found concurrently. The team suggests that trilobites may have been the major food of the ancient predator.

Jim and Sylvia Konecny
3036 Geronimo Rd., Prescott, AZ 86301

THE FOLKLORE OF FOSSILS, continued from February Digest

Ken Machin Westcott Buckinghamshire ENGLAND

What is the basis for the Keynsham legend? Probably it represents an allegorical description of the attempts of the early Christian missionaries and converts to stamp out pre-Christian, pagan forms of worship. Most if not all of these old, pagan religions, constituted some form of nature worship, including geomancy with its belief in earth currents or lines of force. These currents were visualised as straight lines of force, later known as 'ley-lines', running between various points which were marked by standing stones. Focal points for a number of these 'ley'lines' would be regarded as particularly sacred and therefore areas of standing stones at carnac in Brittainy. These earth currents were represented symbolically as a serpent. Thus it was that the early Christians tried to abolish serpent worship and the devil came to be represented as a serpent. A similar situation can be seen in the legend of St. Patrick of Ireland, who is credited with having banished snakes from the Emerald Isle. In fact, Ireland broke away from continental Europe even before the rest of the British Isles and certainly long before snakes and many other animal species had a chance to migrate there. So here again the legend refers to the abolition of serpent worship rather than the actual reptile itself.

Crampstones is a name for ammonites which originates in the western isles of Scotland. It was believed that water in which ammonites had been steeped for some hours would cure cramp in cattle. Similar attributes were recognised in other parts of the British Isles.

Very large ammonites up to two feet or more across, such as Titanites giganteus (J. Sowerby) are familiar to the quarrymen working the Jurassic Portland limestone of the Isle of Portland, Dorset. To them the shells suggested sea serpents or eels and thus they are known locally as Conger Eels. In another part of Dorset i.e., Charmouth, a classic site for the Jurassic Lower Lias, ammonites flattened in some of the shale beds have the appearance of coins and these beds are known as the Coinstone Beds.

Thunderbolts, Devils Pencils, Devils Fingers, St. Peter's Fingers

Satan (poor devil) has received the blame for many geological oddities. All over Britain outstanding geological formations have in the past been attributed to him. Such names as Devils Punchbowl, Devils Frying Pan and Devils Chimney are common. Actually the last named is man-made and was formed by quarrymen excavating around an unusable column of limestone at a quarry outside of Cheltenham in Gloucestershire. A number of fossils are attributed to him also, one of these being the belemnites. Two of the names are Devils Fingers and Devils Pencils, so besides being polydigital, he must also have been quite an artist and scribe, for belemnites must be amongst the commonest of British fossils. At some sites they can be collected by the thousand in a matter of hours. Conversely some virtuous aspect of them must have been apparent in other parts of the country where they are known as St. Peters Fingers. There is a public house at Wimbourne in Dorset which bears this name, no doubt due to the prescence of belemnites in the area. However, perhaps the commonest folkname by which they are known is thunderbolts. This is an allusion to their shape and they were interpreted as darts thrown down from the skys during thunder storms. Plot describes them as having the form of an arrow head and includes them amongst his stones related to Heaven.

In the western isles of Scotland they were called Bat stones and it was believed that if water in which belemnites had been steeped was given to horses

it would cure them of the worms which cause distemper. In southern England it was recognised as a cure for rheumatism and also for sore eyes in both man and horses. For the latter complaint it was rendered to a fine powder and blown in the eyes.

Finds dating back to the stone age period attest to man's long awareness of belemnites. They have been found pierced for stringing and a smoothed belemnite was found in a Bronze Age barrow in Yorkshire.

Devils Toenails

The devils equilibrium was apparently maintained by the number of toes he was encumbered with, for another very common British fossil is the bivalved mollusc Gryphaea arcuata Lamarck, otherwise known as Devils Toenails. This fossil, well known to geologist and layman alike, is abundant in the long band of Lower Lias clays which stretch across England from south-west to north-east. It is also known in isolated patches elsewhere, having been transported and deposited in other areas during the Pleistocene. This bevalve is ancestral to the modern oysters and related to the clams and mussels, but differs in having two unequal valves. Ancestors of Gryphaea arcuata did have two equal valves and lived on a hard sea floor. Conditions changed during the Jurassic and a layer of fine mud was slowly deposited on the seabed. Gryphaea was forced to adapt to these conditions to avoid suffocation and extinction. This was achieved by raising the shell margins above the level of the mud, which it did by an incurving of the left valve and a reduction in size of the right valve which gave it its distinctive shape.

Amongst his 'formed stones', Plot describes one as 'of the oyster kind, oblong figure, very thick and of bluish colour', which can readily be identified as a Gryphaea. This is possibly the same as Concha oblonga crassa described by a Dr. Merret (quoted by Plot) as being from Worcestershire, where they were known as Crow-stones, Crow cups or Egg-stones.

They are also known in the folklore of Scotland where in the Gaelic language they are known as 'clach crubain' or crouching shell and recommended as a cure for arthritis or other pains of the bones. This is possibly a case of sympathetic magic, the distorted shape of the shell being reminiscent of the crippling distortions of arthritis.

Since 1930 Gryphaea arcuata has been incorporated in the Coat of Arms of the Borough of Scunthorpe, Lincolnshire where it is of common occurance in the extensive ironstone workings.

Osses Eds

Dorset dialect has given us the name of one of our most well known geological formations, the 'Lias, i.e. 'layers'. It has also supplied the folk name for the next fossil under consideration, for 'osses eds' is the dialectic form for 'horses heads', the name given by

PLOTS HIPPOCEPHALOIDES

INTERNAL MOULD OF MYOPHORELLA (TRIGONIA) INCURVA (BENNETT)

'OSSES EDS'

quarrymen to bivalved mollusc. However, once again it was Plot who first described them and likened them to horses heads. In his chapters on 'formed stones' he refers to those, 'that resemble the parts of four footed beasts', Describing one species from Headington, Oxfordshire he says it was, 'the most like to the head of a Horse of anything I can think of; having the ears, and crest of the mane appearing between them, the places of the eyes suitably prominent, and the rest of the face entire, only the mouth and nostrils are absent in them all'. The former quarries at Headington are of Corallian (Jurassic) age and it is possible to identify the specimen described as the internal mould of Myopherella (Trigonia) hudlestoni (Lycett). The resemblance to a horses head is fairly obvious when the fossil is held at an oblique angle. The eyes are represented by the muscle scars, the ears by the configuration of the beaks of the shells and the mane by the ridged appearance of the teeth and sockets. Plot named them in consequence Hippocephaloides, an aptly descriptive name which has passed into English folklore as horses heads.

The Dorset quarrymen, however, are referring to two different species than that which Plot describes, when they use the term. For they are working in the Portland limestone and the species here are Myopherella (Trigonia) incurva (Bennett) and Laevitrigonia gibbosa (J. Sowerby), both from the same beds and difficult to distinguish apart.

Screwstones

It is perhaps not surprising that the fossils which have most aroused the curiosity of country folk and thus found a place in folklore, are those which are of extinct species with no modern counterparts for comparison, such as ammonites, trilobites, belemnites etc. Or, those which do have modern counterparts, but are not of common occurance, such as brachiopods and crinoids. A third category are fossils of existing species, but exhibiting some unfamiliar characteristic, such as the intercasts of some bivalves and gastropods. It is in this latter category that the present subject falls. Most country folk would have been familiar with both aquatic and terrestrial gastropods, but the internal mould to anyone not conversant with the internal structure of a gastropod shell, might find them hard to explain. Screwstones are known from various parts of southern England, the Great Oolite of the Bath area being one of these, but the best known is once again from the Portland limestone of Dorset where the term is applied almost exclusively to a single species namely, Aptyxiella portlandica (J de C Sowerby). Its abundance in this locality has led to it being called the Portland Screw.

In the Midlands of England the term is applied to a completely unrelated group of fossils, the crinoids. In Derbyshire and elsewhere it is reserved for the internal moulds of fossil crinoids from the Carboniferous limestone. Derbyshire species have a distinctive screw-thread appearance and are known as Derbyshire Screws.

The Delabole Butterfly and Government Rock

Delabole is a small village in north-west Cornwall and was once the centre of an extensive slate industry. At one time numerous small quarries covered a wide area, but with the decline in the demand for slate for roofing purposes, only the quarries at Delabole now remain. Quarrying has taken place there since the 16th century and the Old Delabole Quarry is perhaps the largest slate quarry in the world. Fossils are comparatively rare in these slates and those which do occur have been flattened and distorted by pressure during the formation of the slates from the original shales. However, the fine grain of the slate has preserved the fossils in exquisite detail. The commonest and best

known is a brachiopod, Cyrtospirifer verneuili (Murchison) belonging to a wide hinged group, the spiriferids. Distortion in the Cornish specimens has led to a lateral elongation of the hinge producing a winged appearance which reminded the quarrymen of butterflies. Since most specimens were collected from the Old Delabole Quarry they became known as Delabole Butterflies.

Similar folklore is known from China since the 4th Century A.D. where a related genus Sinospirifer is known as shih-yen or stone swallows and are used for their supposed medicinal properties.

(Concluded, April Digest)

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MORRIS SHALE HEAPS

For many years the Shale Heaps on the east edge of Morris, Illinois, have been among the more productive areas for collecting Pennsylvanian plant and invertebrate fossils. The writer has been collecting the area for the past 9 years and has built a collection of nearly 100 species of fossil impressions of Fern and Seed Ferns. In addition a number of invertebrate fossils including horseshoe crab, various worms and jellyfish. Recently much of this area has been leveled to provide fill for a highway road project.

The writer recently visited the area and found that the greater part of the most productive parts had been leveled, leaving about one-fourth of the former area, mostly vegetation covered ridges extending north and of the leveled area. A two hour hunt in part of the area produced about twenty concretions containing fossil remains. There is reason to believe that fossil hunting will improve somewhat in the spring after frost and spring rains bring about more erosion; however, there is no doubt that success will lessen as vegetation slows up the erosion process.

Those planning to visit the area should plan for an early spring visit, the earlier the better, but after the spring rains. This is one of the few remaining open areas. Another area, about one mile east of Morris has produced an unusual number of jellyfish as well as many clams with only occasional fern impressions. This is another area which is being leveled and will soon be non-productive. Include it if you plan a trip.

Lewis W. Kehr
1209 Retz Drive
Ottawa, IL 61350

*****

...and HERE'S A PIECE OF THE ROCK

The habits of invertebrates are sometime shown by their shapes, sometimes by their relationships, and sometimes by the positions in which they are found. Ancient oysters, for instance, were attached to other shells or to rocks; belemnites swam like the squids which they resembl some snails bored holes in other shells and devoured the animals inside. Other snails crawled to the top of crinoids and there fed upon waste materials fro meals eaten by their hosts. The snail moved so little and clung so tightly that their shells grew to fit the plat crinoid body. A few starfish adopted the same sort of life, but instead of growing to fit they coiled tightly around their hosts' jointed arms.

Several modern snails bore holes into other mollusks, insert a rough, tongue like (radula) structure, and devour

(continued next page)

He who with pocket-hammer
smites the edge
Of luckless rock
or prominent stone, disguised
In weather-stains
or crusted o'er by Nature.

The substance classes by
some barbarous name.
And thinks himself enriched,
Wealthier, and doubtless
wiser than before.

William Wordsworth,
The Excursion (1814)

THE DIGEST AT WORK

In January an article titled SUPERNOVA KILLED DINOSAURS, ROCKS INDICATE was published in the Digest.

This week's mail brought a letter from an Astronomer in the Department of Physics of a major university. The Professor does "not believe any of Alvarez's speculation on the extinction of the dinosaurs--I fully believe the evidence cannot support their demise by any form of cosmic catastrophe."

It is probably one of the most exciting pieces of mail I have yet received. The reading of scientific books and the discovery of how scientists unravelled the mysteries of fossils is without doubt one of the most fascinating of sleuth stories. As editor of this little Digest I become aware every month of the responsibility in recording facts on the printed page particularly with such a void of scientific knowledge. But, believe me, it forces me to read and I am learning by leaps and bounds. I try to be extraordinarily careful to always give credit to source. I am, however, excited about every article I receive in the mail and try to print as much a variety as possible. When a letter arrives the likes of the one this week, it is unbelievably exciting because the Digest is being read, it is being shared, and it is being talked about.

It is hoped this professor will find time to..."gather all the evidence (he) can find in support of (his) viewpoint" ..."the dinosaur disappeared because they were unable to adapt to changing world climatic conditions..."

At any rate a letter of thanks has been sent to the professor. If we are all lucky, one day you will read his article in support of a completely different theory.

None of this would have happened except for Rosemary Ganshirt, Houston, Texas, a new MAPS member who sent what turned out to be not only an interesting article, but also a controversial subject. Thanks, Rosemary.

You people out there are the greatest!!! Keep sending what you read. We are all learning.

Madelynne L.

*****

LABREA TAR PITS, Continued

an old Mexican land-grant area, but is now understood to apply apecifically to the 23 acre plot of ground on which the fossil-bearing asphalt beds are located.

There have been one half million specimens removed from the tar pits since 1926. Included are 125 variety of species--sloths, saber toothed tigers, mammoths, bears, llamas, camels, horses, and a variety of plants--dug from the layers of the bog.

A special thanks to Dick Johannesen for a delightful and informative meeting enjoyed by all present. Several other people had been to California and visited the seeps--for them it obviously brought back many memories and they could further enlighten and embellish the slides--others of us have vivid pictures in mind and a treat in store when we visit Los Angeles.

*****

THE ROCK, continued

flesh inside the shells of their victims Bored fossils show that this method of feeding was practiced during ancient ages as remote as the Ordovician. Many fish and reptiles from Germany contain the undigested remains of such meals, and so do some American fish. In one the predator seemingly choked to death, for its victim is only partly swallowed. Another, the 14-foot "bulldog tarpon" (Portheus molossus), swallowed a 5-foot 7-inch meal in one piece but died soon afterward. The victim's death struggles probably caused fatal internal injuries.

Some marine reptiles were swift, strong swimmers, and gastroliths sometimes show the range, though not the speed, of their travels. One mosassaur swallowed lumps of a special pink quartzite in western Iowa or Minnesota but died in Kansas, some 400 airline miles away.

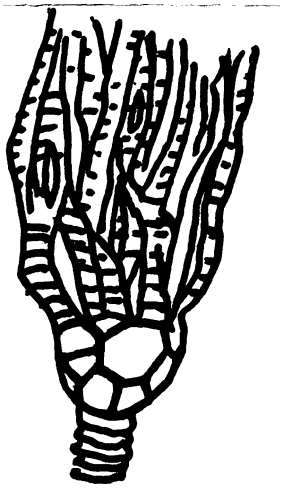
THE FOSSIL BOOK
Fenton and Fenton

The Mid-America Paleontology Society (MAPS) was formed to promote popular interest in the subject of paleontology, to encourage the proper collecting, study, preparation, and display of fossil materials; and to assist other individuals, groups, and institutions interested in the various aspects of paleontology. It is a non-profit society incorporated under the laws of the State of Iowa.

MAPS is affiliated with the Midwest Federation of Mineralogical and Geological Societies, and with the American Federation of Mineralogical Societies. Membership in MAPS is open to anyone, anywhere who is sincerely interested in fossils and the aims of the Society.

Family membership $6.00; individual membership $5.00; junior membership $3.00 (between ages 8 and 16); dealer membership (non voting) $20.00.

MAPS meetings are held on the 1st Saturday of each month (2nd Saturday if inclement weather) October thru May at 2 PM in the Science Building Augustana College, Rock Island, Illinois.



CYATHOCRINITES

MID-AMERICA PALEONTOLOGY SOCIETY

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Dated material - Meeting notice

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